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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,746	12/08/2000	Dominic J. Gasbarro	219.38760X00	1095
7590	02/18/2005		EXAMINER	
C/O ANNE RICHARDS SCHWEGMAN, LUNDBERG, WOESSNER, & KLUTH PA 1600 TCF TOWER 121 S. 8TH STREET MINNEAPOLIS, MN 55402			HSU, ALPUS	
			ART UNIT	PAPER NUMBER
			2665	
			DATE MAILED: 02/18/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/731,746	GASBARRO ET AL.	
	Examiner Alpus H. Hsu	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 October 2004.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 10-20 is/are allowed.  
 6) Claim(s) 1 is/are rejected.  
 7) Claim(s) 2-9 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 17 January 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/10/01, 9/20/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2665

1. Applicant's election without traverse of Group I, claims 1-20 in the reply filed on 25 October 2004 is acknowledged.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed doorbell manager as in claims 1 and 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. The drawings are further objected to because in Figure 7, the labeling for element 716 should be changed from "VI CONTEXT MEMORY" to -- VI CONTEXT MEMORY INTERFACE --. In addition, it is also confusing for having "ADDRESS TRANSLATION BLOCK" as in Figure 7 and "ADDRESS TRANSLATOR" as in Figure 10. Are they referring to the same element?
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by CHAPMAN et al. in U.S Patent No. 6,628,609.

Referring to claim 1, by the broadest interpretation, CHAPMAN et al. discloses a host-fabric adapter (202 & 208), comprising: at least one Micro-Engine (208) arranged to establish connections and support data transfers, via a switched fabric (210), in response to work requests from a host system for data transfers; a context memory interface (310) arranged to provide context information necessary for data transfers, and a doorbell manager (308) arranged to update the context information needed for said Micro-Engine (208) to process said work requests for data transfers, via said switched fabric (210).

7. Claims 10-20 are allowed.

8. Claims 2-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an examiner's statement of reasons for allowance:

Referring to claims 2-9, all prior arts fail to teach or suggest a context memory interface within the host-fabric adapter comprises: an address translator arranged to perform the address translation between a ME assigned address and a memory physical address to access context information; and a context memory having a bandwidth optimized, vertically sliced memory architecture arranged to store context information needed for said Micro-Engine (ME) to process said work requests for data transfers, via said switched fabric.

Referring to claims 10-16, all prior arts fail to teach or suggest a host-fabric adapter installed at a host system for connecting to a switched fabric of a data network, comprising: at least one Micro-Engine (ME) arranged to establish connections and support data transfers via said switched fabric; a serial interface arranged to receive and transmit data packets from said switched fabric for data transfers; a host interface arranged to receive and transmit host data transfer requests, in the form of descriptors, from said host system for data transfers; a context memory having a bandwidth-optimized, area-minimal vertically sliced memory architecture arranged to store context information needed for said Micro-Engine (ME) to process host data transfer requests for data transfers, and a doorbell manager arranged to update the context information needed for said Micro-Engine (ME) to process host data transfer requests for data transfers.

Referring to claims 17-20, all prior arts fail to teach or suggest a method of designing a context memory having a bandwidth-optimized, area-minimal vertically sliced memory architecture, comprising: determining a register width requirement and a system architecture requirement of registers of different sizes designated for said context memory; selecting a number of vertically arranged memory slices of registers of different sizes based on the register

width requirement and the system architecture requirement such that each memory slice has a number of registers provided by said system architecture and is arranged to supply respective bits of data, via a system bus of said register width requirement, determining the depth of each of said memory slices based on the respective number of registers provided by said system architecture; and establishing a default location that is initialized to zero ("0") in all subsequent memory slices which serves as a padding value when a memory location of a respective memory slice exceeding a register width of said memory slice is accessed, via said system bus.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chang et al. '643, Dobecki and Hamlin are all cited to show the common feature of switch fabric interface or adapter for establishing connections and supporting data transfers utilizing memory, processor, and controller similar to the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHH



Alpus H. Hsu  
Primary Examiner  
Art Unit 2665